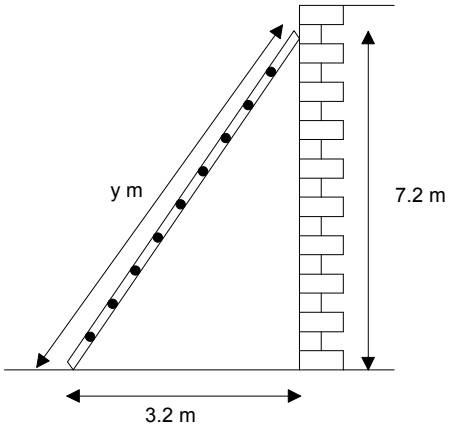
GCSE Trigonometry: Assessment A

Your Name:	**Tutor Group:**
End of GCSE target grade:	**Grade achieved:**

Grade C objectives	☺	😐	☹
• I can use Pythagoras' theorem to find any side of a right-angled triangle			
• I can use Pythagoras' theorem to find the height of an isosceles triangle			
• I can use Pythagoras' theorem in practical problems			

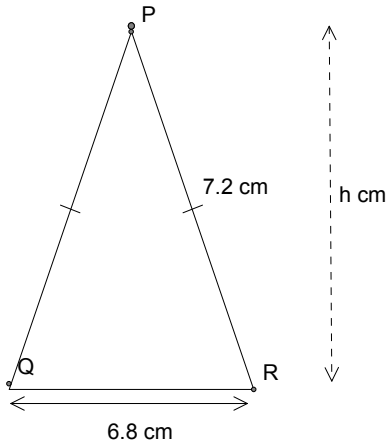
1.



A ladder is leaning up the side of a wall.
The ladder reaches 7.2 m up the wall.
The bottom of the ladder is 3.2 m away from the base of the wall.
Calculate y, the length of the ladder.

y = ... m [3]

2. PQR is an isosceles triangle.



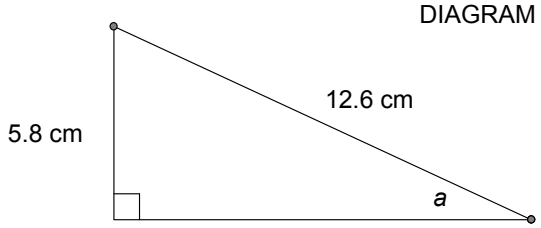
PQ = PR = 7.2 cm
QR = 6.8 cm
Calculate the height, *h*, of triangle PQR.

h = ……cm [3]

Grade B objectives	☺	😐	☹
• I can use sine, cosine and tangent to calculate an angle or a side in a right-angled triangle.			

3.

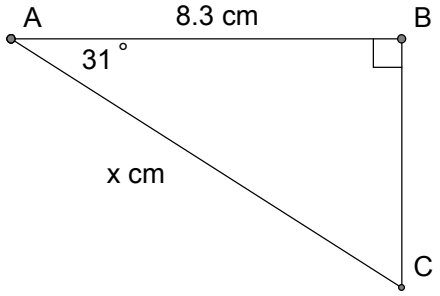
DIAGRAM NOT ACCURATELY DRAWN



Calculate the size of the angle marked *a.* Give your answer to one decimal place.

a = ...° [3]

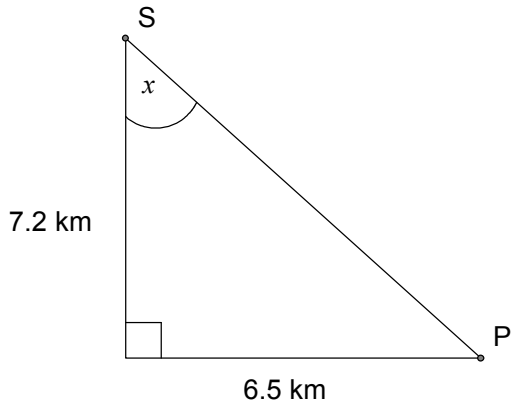
4. *ABC* is a right-angled triangle.
AB = 8.3 cm
Angle *CAB* = 31°



Find the length of *AC* (marked *x* in the diagram).
Give your answer to a suitable degree of accuracy.

x = ...cm [4]

5. A ship leaves a port P and sails 6.5 km due West and then 7.2 km due North.



a) Calculate the size of angle *x*. Give your answer correct to 3 significant figures.

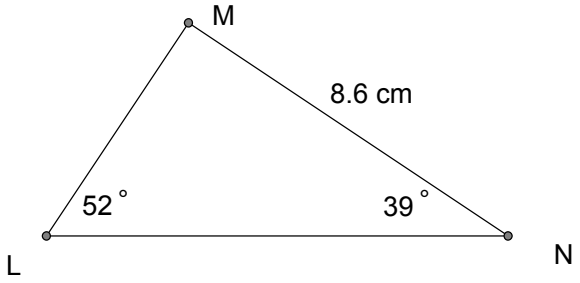
x = ……° [2]

b) Calculate the bearing of the ship's final position, S, from the port, P.

……° [1]

Grade A objectives	☺	😐	☹
• I can use the sine rule to find the missing sides and missing angles in any triangle.			
• I can use the cosine rule to find the missing sides and missing angles in any triangle.			
• I can use the formula for the area of a non right-angled triangle.			

6.



In triangle LMN:
angle MLN = 52°
angle LNM = 39°
MN = 8.6 cm.

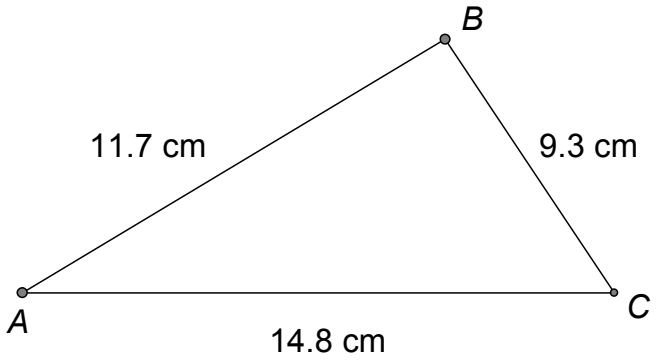
a) Calculate the length LN. Give your answer correct to 2 significant figures.

LN = ……..cm [4]

b) Calculate the area of triangle LMN. Give your answer correct to 2 significant figures.

Area = …….cm^2 [3]

7.



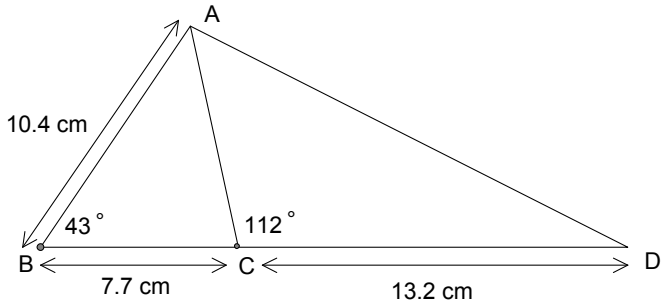
Calculate the size of angle BAC.

Angle BAC = ……..°

[4]

Grade A* objectives	☺	😐	☹
• I can solve multi-step problems involving the sine and cosine rules.			
• I can solve trigonometry problems in 3 dimensions.			

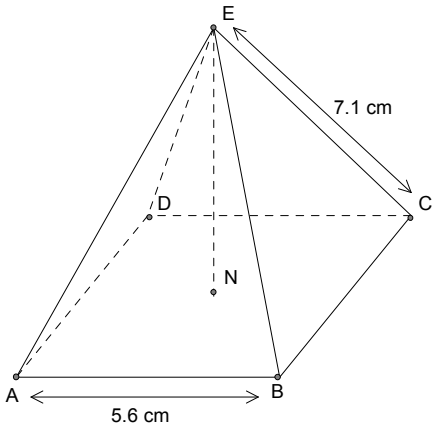
8.



AB = 10.4 cm, BC = 7.7 cm, CD = 13.2 cm
Angle ACD = 112 ° and angle ABC = 43°.
Calculate the angle CAD.

CAD = ……° [5]

9. ABCDE is a square-based pyramid.
AB = BC = CD = AD = 5.6 cm
N is the centre of the square ABCD.
E is directly above N.



a) Calculate the distance BD.

BD = ……cm
[2]

b) Calculate angle EBN.

Angle EBN = ……°
[3]

c) Calculate the angle that ABE makes with the base of the pyramid.

……°
[3]

Teacher feedback:

In order to get to the next grade (or in order to improve the quality of your work) you should…

The following aspect of your work was particularly good …